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EXAMINER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 15

Serial Number: 09/411,642  
Filing Date: 04 October 1999  
Appellant(s): Gene M.Nitschke

Robert J. Webster  
For Appellant

**MAILED**

FFB 11 2003

Technology Center 2100

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed 21  
November 2002.

**(1) Real Party in Interest**

A statement identifying the real party in interest in  
contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and  
interferences which will directly affect or be directly affected  
by or have a bearing on the decision in the pending appeal is  
contained in the brief.

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**(3) Status of claims.**

The statement of the status of claims contained in the brief is incorrect (Appellant missing the status of claims 5 and 17). Claim 5 depends directly from claim 4 and indirectly from claim 1. Claim 17 depends directly from claim 12.

**(4) Status of Amendments After Final.**

The appellant's statement of the status of amendments in response to the second Office Action (final rejection) contained in the brief is correct.

**(5) Summary of invention.**

The summary of invention contained in the brief is correct.

**(6) Issues.**

Examiner agree with the issues set forth in the appellant's Appeal Brief.

**(7) Grouping of claims.**

Appellant's brief includes a statement that the rejected claims do not stand or fall together. The reasons as to why Appellant believes the claims to be separately patentable are set

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forth in the Argument section of this Brief. Applicant's statement that claims 8, 9 stand or fall together not agree with.

**(8) *Claims appealed.***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of record.***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,787,194	Yair	28 July 1998
6,341,183	Goldberg	22 Jan. 2002
5,710,877	Marimont et al.	20 Jan. 1998
6,026,182	Lee et al.	15 Feb. 2000
6,009,196	Mahoney	28 Dec. 1999

**(10) *New prior art.***

No new prior art has been applied in this examiner's answer.

**(11) *Grounds of rejection.***

The following ground(s) of rejection are applicable to the appealed claims:

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1. Claims 1-3, 6, 9-14, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of Goldberg (USPN: 6,341,183).

As per claims 1(system), 10(storage-medium), and 12(method); Yair teaches a system that assembles a dedicated user interface that allows an input segmented image to be manipulated comprising:

a segmentation classification association circuit taht associates a segmentation classifier and at least one segment of the input segmented image is taught by Yair as the technique of provides image processing apparatus for segmenting an input image into image portions ...the apparatus comprising identification logic for identifying connected components in the input image; classification logic for determining into which of a number of predefined classes a connected component falls (see col. 2, lines 8-14);

Yair, however, does not disclose the limitation of an image processing tool association circuit that determines at least one image processing tool corresponding to the segmentation classifier;

Goldberg discloses the limitation of an image processing

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tool association circuit that determines at least one image processing tool as the technique of an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language programming environment developed by Research Systems, Inc. (See col. 2, lines 21-25) which include Analysis Toobbox. Advantageously, a toolbox of various analytical tools can be incorporated into the GUI-based image acquisition interface (see col. 8, lines 25-28);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of an image processing tool association circuit that determines at least one image processing tool by Goldberg into that of Yair's segment classifier invention. By doing so, the system would be enhanced by providing real-time data analysis support for images acquired during the alignment of image acquisition analysis.

As per claims 2(system), 11(storage-medium), and 13(method); Yair discloses the invention substantially as claimed. Yair, however, does not disclose the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier;

Goldberg discloses the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool as the technique of an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language programming environment developed by Research Systems, Inc. (see col. 2, lines 21-25) which include Analysis Toolbox. Advantageously, a toolbox of various analytical tools can be incorporated into the GUI-based image acquisition interface (see col. 8, lines 25-28) wherein the GUI interface program of the presentation provides the following features: pulldown menu, commonly used hardware binning options 14 are available, the available detector speeds 16 are available from a pulldown menu (see col. 4, lines 22-31) and in order to switch quickly from one set of parameters to another, the user pushes only one button 28 (see col. 4, lines 50-52);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool introduced by Goldberg into that of Yair's segment classifier invention. By doing so, the system would be enhanced by providing better processing tools in GUI-based interface to end users.

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As per claims 3(system) and 14(method); Yair discloses the invention substantially as claimed. Yair, however, does not disclose the limitation of the system modifies the at least one segment based on a selection of the at least one image processing tool associated with the at least one user interface;

Goldberg discloses the limitation of the system modifies the at least one segment based on a selection of the at least one image processing tool associated with the at least one user interface as the technique of Four tools are described herein. They are the Fourier transform Alignment Tool, the Contrast Tool, the Wavefront Tool, and the Zernike Polynomial Tool. It is not difficult to modify the existing tools or add additional tools to expand the capabilities of the toolbox (see col. 8, lines 59-63);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of modifying the at least one segment based on a selection of the at least one image processing tool associated with the at least one user interface introduced by Goldberg into that of Yair's segment classifier invention. By doing so, the system would be enhanced by providing more varieties and selectable processing tools in GUI-based interface to end user wherein the user has capable of selecting tool based on his/her own desired manner.



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As per claims 9(system) and 21(method); Yair discloses the invention substantially as claimed. Yair, however, does not disclose the limitation of wherein the dedicated user interface is a graphical user interface comprising at least one of drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar;

Goldberg discloses the limitation of wherein the dedicated user interface is a graphical user interface comprising at least one of drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar as the technique of the GUI interface program of the present invention provides the following features: using a pulldown menu, commonly used hardware binning options 14 are available (see col. 4, lines 22-29), modes 26 selected by buttons 28 (see col. 4, lines 45-46), large GO and STOP buttons (see col. 5, line 11), the image size can be scaed for display from 1/4 th size to 8 times large in multiples of 1/4 size using a scroll-bar, or slide 112 (see col. 5, lines 63-65), and using the pull-down menu 508 at the top of the toolbox window, the direction of the data stripe used to access contrast can be set to vertical or horizontal (see col. 9, lines 62-64);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of wherein the dedicated user interface is a graphical

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user interface comprising at least one of drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar introduced by Goldberg into that of Yair's segment classifier invention. By doing so, the system would be enhanced by providing more selectable tools in GUI-based interface to end user wherein the user has capable of selecting tool based on his/her own desired manner.

As per claims 6(system) and 16(method), the limitation of segmentation selection circuit that selects the at least one segment is taught by Yair as the technique of identifying connected components in the input image; classifying the connected components by determining into which of a number of predefined classes a connected components falls, at least one of said classes indicating that the connected component is most likely to be single character; and iteratively merging and slitting the connected components and reclassifying the resulting slit and/or merged connected components until an image segmentation is achieved which meets a predefined criterion (see col. 3, lines 42-50). These claims are therefore rejected for the reason as set forth above.

2. Claims 4-5, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of

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Goldberg (USPN: 6,341,183) and further in view of Marimont et al. (USPN: 5,710,877) hereinafter Marimont.

As per claims 4(system) and 15(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg, however, do not disclose the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image;

Marimont discloses the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image as the technique of the discovery of a data structure representation of an image called an image structure map (ISM) that accurately and explicitly represents the geometric and topological properties of an image and allows for efficient and accurate spatial indexing of regions of an image (see col. 3, lines 9-14). Marimont's image structure map (ISM) invention further discloses ~~input signal circuitry~~ is circuitry for providing input signals to the processor from an input signal source. The input signal source may be directed by a human user or by an automatic operation under control of a processor. ~~User input circuitry~~ is circuitry for providing signals based on action of a user. User input circuitry can receive signals from one or more ~~user input devices~~ that provide signals based on actions of a user, such as

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a keyboard, a mouse, or stylus device (see col. 9, lines 53-61)..For example, a signal from a user input device indicates a position of an image if the signal includes data from which the position can be uniquely identified (see col. 10, lines 4-6);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image introduced by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by permitting user interaction with the structures in an original image through image structure mapping.

As per claims 5(system) and 20(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg, however, do not disclose the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device;

Marimont discloses the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device as the technique of the method comprises receiving an image interaction signal from the input circuitry indicating an image interaction request from a user to modify an image structure map data structure, referred to as in an image

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structure map, that spatial indexes a displayed original image. The displayed original image represents an original image data structure, referred to as an original image, having image locations therein specified according to a first coordinate system (see col. 5, lines 5-13);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device introduced by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by signaling the user to know where is the location of the image structure map from which user will interact with.

3. Claims 7 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of Goldberg (USPN: 6,341,183) and further in view of Lee et al. (USPN: 6,026,182) hereinafter Lee.

As per claims 7(system) and 17(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg, however, do not disclose the limitation of image processing tool association determines the at least one image processing tool based on the at least one of predefined configuration association

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data, updatable configuration association data or user configuration association data;

Lee discloses the limitation of predefined configuration association data as the technique of precompression extrapolation method for extrapolating image features of arbitrary configuration to a predefined configuration (see col. 22, lines 47-48);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of predefined configuration association data introduced by Marimont into that of Goldberg image processing tool and further into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by providing predefined configuration tool which available to image processing toolbox to end user.

As per claim 18, due to the similarity of this claim to that of claim 17, this claim is therefore rejected for the same reason applied to claim 17.

4. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of Goldberg (USPN: 6,341,183) and further in view of Mahoney (USPN: 6,009,196).

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As per claims 8(system) and 19(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg, however, do not disclose the limitation of segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region;

Mahoney discloses the missing limitation of a text<sub>o</sub> region as the technique of analyzing image data, and more particular to the analysis of image data representing images containing text to classify the types of non-running text regions therein without the need for predefining structure within the image. The invention first employs the characteristics of running text regions to distinguish them from non-running text regions in a page image (see col. 1, lines 22-29);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a text region (running text region and non-running text region) introduced by Mahoney into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by providing more enhanced classifier tools to end user.

**(12) New ground of rejection.**

This Examiner's Answer contains no new grounds of rejection.

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**(13) Response to Argument.**

Appelleant argues (pages 15-20) with respect to claims 1-3, 6, 9-14, 16 and 21; that Yair contains no disclosure or suggestion of, or any need for, a user interface, let alone a dedicated user interface or a system that assembles a dedicated user interface that allows an input segmented image to be manipulated as recited in claim 1. Nor does Yair disclose a dedicated user input that allows an input segmented image to be manipulated....Yair is directed to segmented an unsegmented OCR input image. Examiner disagree to this contention because Yair discloses identifying connected components in the input image, classifying the connected components by determining into which of a number of predefined classes a connected components fall (see col.3, lines 41-45), segmentation module 140 (see col. 4, line 10), and the connected components of the image are obtained by passing through image rows one by one (see col. 5, lines 18-20).

On the second paragraph of page 16, Appelleant argues that it is clear from this reading of Yair, that what is input to Yair is an unsegmented image that is sent to segmentation module 140. Examiner do not agree to this argument because in Yair's invention image is segmented by means of the connected components by determining into which of a number of predefined classes a



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connected components fall (see col.3, lines 41-45).

On the third paragraph of page 16, Appellant argues that Yair is used to segment the unsegmented image input to the segmenter 140, not to associated a segmentation classifier and at least one segment of the input segment image as recited. Yair's classification portion or segmenter 140 is not working on a segmented image. Rather, it is segmenting an unsegmented image. Examiner do not agree to this contention because Yair segmented image input associated a segmentatin classifier and at least one segment of the input segment image as the technique of the invention provide image processing apparatus for segmenting an input image into image portions (see col. 2, lines 8-9), identification logic for identifying connected components in the input image (see col. 2, lines 11-12), all components of an input image are iteratively merged and split until an acceptable segmentation is achieved (see col. 2, lines 31-33), and the whole segmentation process is controlled and monitored by a classifier defined over the space of connected components with a set of classes that have meaningful segmental information (see col. 2, lines 42-45).

On the third paragraph of page 17 and last paragraph of page 17, Appellant argues that Yair also does not diclose an image processing tool associatin circuit that determines at least one image processing tool corresponding to the image classifier and

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Goldberd fials to provide an image processing tool association circuit that determines one image porcessing tool corresponding to any segentation classifier, let alone the segmentation classifier recited in claim 1. Examiner do agree that Yair fail to disclose the limitation of an image processing tool associatin circuit that determines at least one image processing tool corresponding to the image classifier. However, Goldberg discloses this missing limitation as the technique of GUI-based image acquisition interface (see col. 8, lines 27-28) and a toolbox of various tools (see col. 8, lines 25-26) and Goldberg also discloses the limitation of an image processing tool association circuit that determines at least one image processing tool as the technique of an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language programming environment developed by Research Systems, Inc. (see column 2, lines 21-25) which include Analysis Toobbox. Advantageously, a toolbox of various analytical tools can be incorporated into the GUI-based image acquisition interface (see col. 8, lines 25-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include Goldberg's GUI-based image interace and its associated toolbox into that of Yair's segmented image invention . By doing so, the system would

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be enhanced by providing graphical user image acquisition interface and user control toolbox to end user wherein user can analyzes and edits in image acquisition processing.

Claims 1, 10 and 12 are remain rejected for the reasons as set forth above.

On pages 20-21; with respect to claims 2, 11, and 13; Appellant argues that ❖ Claim 2 recites the additional feature of a user interface assembly circuit that assembles at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier. Neither Yair nor Goldberg discloses or suggest an image processing tool corresponding to an image segmentation classifier❖.

Examiner, however, do not agree to this contention because Goldberg discloses the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool as the technique of an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language programming environment developed by Research Systems, Inc. (see col. 2, lines 21-25) which include Analysis Toobbox. Advantageously, a toolbox of various analytical tools can be incorporated into the GUI-based image acquisition

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interface (see col. 8, lines 25-28) wherein the GUI interface program of the presentation provides the following features: pulldown menu, commonly used hardware binning options 14 are available, the available detector speeds 16 are available from a pulldown menu (see col. 4, lines 22-31) and in order to switch quickly from one set of parameters to another, the user pushes only one button 28 (see col.4, lines 50-52);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool introduced by Goldberg into that of Yair's segmentation classifier invention. By doing so, the system would be enhanced by providing better processing tools in GUI-based interface to end users.

These claims 2, 11, and 13 are therefore remain rejected for the reason as set forth above.

On the third paragraph of page 21; with respect to claims 6 and 16; Appellant argues that ~~Neither~~ Yair nor Goldberg discloses the additional feature recited in these claims, e.g., ~~further~~ comprising a segmentation selection circuit that selects the at least one segment~~.~~ Examiner, however, do not agree to

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this contention because the limitation of segmentation selection circuit that selects the at least one segment is taught by Yair as the technique of identifying connected components in the input image; classifying the connected components by determining into which of a number of predefined classes a connected components falls, at least one of said classes indicating that the connected component is most likely to be single character; and iteratively merging and slitting the connected components and reclassifying the resulting slit and/or merged connected components until an image segmentation is achieved which meets a predefined criterion (see column 3, lines 42-50). These claims are therefore remain rejected for the reason as set forth aboved.

On pages 22-25; with respect to claims 4-5, 15 and 20; Appellant argues that the final office Action alleges that Marimont discloses that the feature of the segment mapping circuit that detemines the at least one segment based on a position of a user input device in the inputted segmented image, the statement in the final Office Action that the input signal source may be directed by a human user or by an automatic operation under control of a processor is at best misleading. Marimont actually teaches using both automatic and human user image interaction are required, there is no proper motivation to modify Goldberg with Marimont because Goldberg has no image

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structure map with which user may interact. And reversal of the rejection of claims 4, 5, 15 and 20 under 35 U.S.C. 103 (a) as unpatentable over the combination of Yair, Goldberg and Marimont is respectfully solicited. Examiner, however do not agree to these contention because:

1. As per claims 4(system) and 15(method), Yair-Goldberg do not disclose the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image;

Marimont discloses the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image as the technique of the discovery of a data structure representation of an image called an image structure map (ISM) that accurately and explicitly represents the geometric and topological properties of an image and allows for efficient and accurate spatial indexing of regions of an image (see col. 3, lines 9-14). Marimont's image structure map (ISM) invention further discloses input signal circuitry is circuitry for providing input signals to the processor from an input signal source. The input signal source may be directed by a human user or by an automatic operation under control of a processor. User input circuitry is circuitry for providing signals based on action of a user. User input circuitry can receive signals from one or more user input

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devices that provide signals based on actions of a user, such as a keyboard, a mouse, or stylus device (see col. 9, lines 53-61)...For example, a signal from a user input device indicates a position of an image if the signal includes data from which the position can be uniquely identified (see col. 10, lines 4-6);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image introduced by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by permitting user interaction with the structures position of an original image through image structure mapping (motivation).

As per claims 5(system) and 20(method), Yair-Goldberg do not disclose the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device;

Marimont discloses the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device as the technique of the method comprises receiving an image interaction signal from the input circuitry

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indicating an image interaction request from a user to modify an image structure map data structure, referred to as in an image structure map, that spatial indexes a displayed original image. The displayed original image represents an original image data structure, referred to as an original image, having image locations therein specified according to a first coordinate system (see col. 5, lines 5-13);

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by signaling the user to know where is the location of the image structure map from which user should interacts with (motivation).

2. In Marimont's invention image structure map (ISM), the image is appearance to human user, therefore the user can position the user's input device in order to perform a task. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by signaling the user to know



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where is the location of the image structure map from which user should interacts with (motivation).

These claims 4-5, 15, and 20 are therefore remain rejected for the reasons as set forth above.

On pages 25-27; with respect to claims 7, 17, and 18; Appellant argues that ❖Claims 7, 17 and 18 are patentable over Yair and Goldberg for the reasons stated above regarding claims 1 and 12. Moreover, Lee does not supply the deficiencies outlined above in Yair and Goldberg..The Final Office Action fails to provide any proper mitivation to modify the combination of Yair and Goldberg based on Lee....the combination of Yair, Goldberg and Lee fails to render obvious the subject matter of claims 7, 17 and 18 under 35 U.S.C. 103(a, and this rejection should be reversed❖.

Examiner, however, do not agree to this contention because:

As per claims 7(system) and 17(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg do not disclose the limitation of image processing tool association determines the at least one image processing tool based on at least one of predefined configuration association data, updatable configuration association data or user configuration association data;

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Lee discloses the limitation of predefined configuration association data as the technique of precompression extrapolation method for extrapolating image features of arbitrary configuration to a predefined configuration (see col. 22, lines 47-48);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of predefined configuration association data introduced by Marimont into that of Goldberg image processing tool and further into that of Yair-Goldberg combined invention. By doing so, the system would be enhanced by providing predefined configuration tool which available to image processing toolbox to end user.

As per claim 18, due to the similarity of this claim to that of claim 17, this claim is therefore rejected for the same reason applied to claim 17.

These claims 7, 17 and 18 are remain rejected for the reasons as set forth above.

Finally, on pages 27-29, with respect to claims 8 and 19, Appellant argues that ❖ Claim 8 depends from claim 1 and recites that the segmentation classifier corresponds to at least one of a photographic region, a haft-tone region, a text region, a line

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art region, a black and white region or a color region.❖, ❖this is not a clear and particular motivation showing, but rather, a broad conclusory statement about the teaching of these multiple references, which is not proper evidence to motivate one of ordinary skill in the art to desire to modify the references.❖ Claims 8 and 19 are patentable over Yair and Goldberg for at least the reasons stated above regarding to claims 1 and 12. Additionally, Mahoney does not cure the defects in the combination of Yair and Goldberg. Thus, for the reasons above, claims 8 and 19 patentably define over Yair, Goldberg and Mahoney.....Reversal of the rejection of claims 8 and 19 as unpatentable over the combination of Yair, Goldberg and Mahoney is respectfully solicited.❖.

Examiner, however, do not agree to this contention because:

As per claims 8(system) and 19(method), Yair-Goldberg do not disclose the limitation of segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region;

Mahoney discloses the missing limitation of a text region as the technique of analyzing image data, and more particular to the analysis of image data representing images containing text to classify the types of non-running text regions therein without the need for predefining structure within the image. The

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invention first employs the characteristics of running text regions to distinguish them from non-running text regions in a page image (see col. 1, lines 22-29);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the limitation of a text region (running text region and non-running text region) introduced by Mahoney into that of Yair-Goldberg combined segmentation classifier invention. By doing so, the system would be enhanced by providing more tools in term of a text region to end user wherein text can emphasizing layout structure to image analysis.

These claims 8 and 9 are therefore remain rejected for the reason as set forth above.

For the above reasons, it is believed that the rejections should be sustained.

Conferree:

Respectfully submitted,

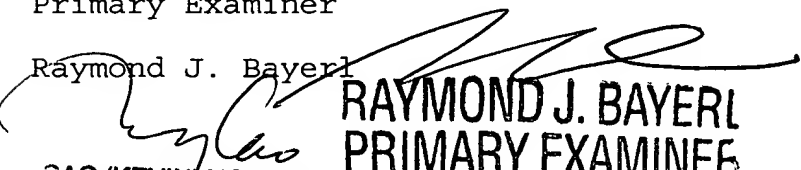
Primary Examiner

Raymond J. Bayerl

CAO (KEVIN) NGUYEN  
PRIMARY EXAMINER

Primary Examiner

Kelvin Nguyen

  
RAYMOND J. BAYERL  
PRIMARY EXAMINER  
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Examiner Cuong T. Thai

A handwritten signature in black ink, appearing to read 'Cuong T. Thai', with a long horizontal flourish extending to the right.

February 10, 2003